SECTION 4. INSTALLING AND CONFIGURING THE GCCS COE KERNEL VERSION 2.2

4.1 GCCS COE Kernel Description

This section addresses using the GCCS COE Kernel to build new systems. If you are upgrading a GCCS Version 2.1 system go directly to Section 16.

The GCCS COE Kernel installs the minimum set of GCCS software required to begin loading GCCS software segments. This includes the latest versions of the Solaris 2.3 operating system patches, the Executive Manager, and the security manager and system administration accounts. Key points concerning the installation of the GCCS COE Kernel are noted below.

- When installing the GCCS COE Kernel of the IP, for the first time, you will be required to provide the information listed in Section 4.2.

- During the installation process the GCCS COE Kernel creates a configuration file, *kernel_config*, located in */h/data/global* on the Executive Manager(EM) server or the system sharing */h/data/global*, which contains the information provided during the initial installation.

- This configuration file will be used by all subsequent installations of the GCCS COE Kernel, obviating the need to answer the majority of the questions again.

- Since the configuration file is located in */h/data/global*, the EM server or the system sharing */h/data/global* should be built first.

- All the Executive Manager patches and upgrades, as of 08 August 1996 (EM Patch 6.0.01), have been integrated into the GCCS COE Kernel.

- If */h/data/global* exists as a separate disk partition on the EM Server or is NFS mounted by the EM Server the EM Server will automatically be configured (i.e., *EM_make_server* will be run) during the reboot after the Solaris OS patches are loaded.

- The GCCS COE Kernel has been designed so that it may be loaded multiple times on the same platform in the event that the install was aborted before completion.

4.2 Required Installation Information

NOTE: If you do not want the Sybase "sa" password stored in the kernel configuration file, do not enter the "sa" password when initially prompted during the first installation of the GCCS COE Kernel.

NOTE: Questions b through i will not be asked if the platform is a standalone system. "Standalone" means either the workstation is a remote workstation that uses the character based interface, or is a workstation that is its own EM and account server and does not use Sybase. Remote EM Clients are not standalone systems.

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a. Is this platform going to be standalone: _____
b. Executive Manager server IP address: _____
c. Account server IP address: _____
d. NIS+ server IP address: _____
e. NIS+ domain name: _____
f. Mail Host IP address: _____
g. Sybase server IP address: _____
h. Sybase "sa" password: _____
i. AMHS server IP address: _____
j. Oracle Database server IP address: _____
k. JDISS server IP address: _____
l. Default router IP address: _____
m. DNS domain name: _____
n. Primary DNS server IP address: _____

NOTE: The following information is required on NIS+ server only.

IP Address and Hostname of all GCCS workstations in the NIS+ domain:

Hostname: _____ IP Address: _____
Hostname: _____ IP Address: _____
Hostname: _____ IP Address: _____
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Hostname: _____ IP Address: _____

4.3 Loading the GCCS COE Kernel Tape

Perform the following steps:

1. Log in as **root**.

2. Take the system down to single user mode by entering:

```
INIT: SINGLE USER MODE

type Ctrl-d to proceed with normal startup
(or give root password for system maintenance):
```

`init s`<**Return**>

3. Enter the **root password** and press <**Return**>.

4. Enter the following to ensure that */tmp* is still mounted:

   mountall <**Return**>

5. If the Kernel Network Installer is being used (See Section 6.8, Building a Kernel Network Installer) execute the following:

   cd /h/data/global <**Return**>
   tar xvf kernel_2.2_tar <**Return**>

6. If the GCCS COE Kernel is going to be loaded directly off the tape execute the following:

   a. Load the GCCS COE Kernel tape into a tape drive.

   b. If the tape drive is attached to the system execute the following:

   tar xvf /dev/rmt/(tape drive number)**m**

   c. If the tape drive is attached to another SUN system execute the following:

   rsh (Remote systems IP address) **dd if=/dev/rmt/** (tape drive number) **m**
   s=20b | tar xvBf

   d. The tar of the tape will take approximately 10 minutes.

4.4 Configuring the GCCS COE Kernel Version 2.2

Execute the following to begin the configuration process:

```
cd /tmp/kernel
/configure
```

Answer the following questions using the information entered in Section 4.2.

```
Is this platform going to be standalone? (y/n) [n]:
```

1. Enter the appropriate answer, **[y** or **n]**, and press <**Return**>.

NOTE: If the kernel configuration file*/h/data/global/kernel_config* is available questions 2 through28 will not be asked. Go to step 29 to continue.

```
Enter the IP address of your Executive Manager server?:
```

```
The IP address of your Executive Manager server is <example:
164.117.210.100>

Is this value correct?(y/n)[n]:
```

```
Enter the IP address of your Account </h/USERS> server?:
```

```
The IP address of your Account server is <example: 164.117.210.61>

Is this value correct?(y/n)[n]:
```

2. Enter the IP address of the Executive Manager and press <**Return**>.
3. Verify the information, enter **[y]**, and press <**Return**>.
4. Enter the IP address of the Account Server and press <**Return**>.
5. Verify the information, enter **[y]**, and press <**Return**>.
6. Enter the IP address of the NIS+ server and press <**Return**>.
7. Verify the information, enter **[y]**, and press <**Return**>.

```
Enter the IP address of your NIS+ server?:
```

```
The IP address of your NIS+ server is <example: 164.117.210.100>

Is this value correct?(y/n)[n]:
```

```
Enter the NIS+ domain name for this workstation:
```

8. Enter the **NIS+ domain name** and press <**Return**>.

```
The NIS+ domain name for this workstation is:   <example:
osprey.gccs.nis>

Is this correct?(y/n)[n]:
```

9. Verify the information, enter **[y]**, and press <**Return**>.

```
Enter the IP address of your Mail Host server?:
```

10. Enter the IP address of the Mail Host server and press <**Return**>.

```
The IP address of your Mail Host server is <example:  164.117.210.61>

Is this value correct? (y/n)[n]:
```

11. Verify the information, enter **[y]**, and press <**Return**>.

```
Enter the IP address of your Sybase server?:
```

12. Enter the IP address of the Sybase server and press <**Return**>.

```
The IP address of your Sybase server is <example:  164.117.210.100>

Is this value correct?(y/n)[n]:
Please enter current SYBASE SA password:
```

13. Verify the information, enter **[y]**, and press <**Return**>.

14. Enter the **Sybase Asa® password**, if you wish it to be stored in kernel configuration file, and press <**Return**>.

```
You have entered <sybase password> for the SYBASE SA password

Is this correct?(y/n)[n]:
```

15. Verify the information, enter **[y]**, and press <**Return**>.

```
Enter the IP address of your AMHS server?:
```

16. Enter the IP addressof the AMHS server and press <**Return**>.

```
The IP address of your AMHS server is <example:  164.117.210.51>

Is this value correct?(y/n)[n]:
```

17. Verify the information, enter **[y]**, and press <**Return**>.

```
Enter the IP address of your Oracle Database server?:
```

18. Enter the IP address of your Oracle Database server and press **Return**>.

```
The IP address of your Oracle Database server is <example:
164.117.210.61>

Is this value correct?(y/n)[n]:
```

19. Verify the information, enter **[y]**, and press <**Return**>.

```
Enter the IP address of your JDISS server?:
```

20. Enter the IP address of the JDISS server and press <**Return**>.

```
The IP address of your JDISS server is <example:  164.117.210.100>

Is this value correct?(y/n)[n]:
```

21. Verify the information, select **[y]**, and press <**Return**>.

22. Enter the IP address of the default router for this GCCS network and press **Return**>.

```
Enter the IP address of the default router for the GCCS network:
```

```
The IP address of your default router is 164.117.210.5

Is this correct?(y/n)[n]:
```

23. Verify the information, enter **[y]**, and press <**Return**>.

```
Enter the DNS domain name of your site:
```

24. Enter the **DNS domain name** for your site and press <**Return**>.

```
Enter the IP address of your sites primary DNS server:
```

25. Enter the **IP address** of your sites primary DNS server and press <**Return**>.

```
The DNS domain name of your site is:   <example: osf.disa.smil..mil>
The IP address of your sites primary DNS server is:   <example:
164.117.210.63>
Are these values correct?(y/n)[n]:
```

26. Verify the information, select **[y]**, and press <**Return**>.

```
You have input the following information was input:

Executive Manager server IP address: 164.117.210.100
Account server IP address:           164.117.210.61
NIS+ server IP address:              164.117.210.100
NIS+ domain name:                    osprey.gccs.nis
Mail Host IP address:                164.117.210.61
Sybase server IP address:            164.117.210.100
Sybase sa password:                  sybase1
AMHS server IP address:              164.117.210.51
Oracle Database server IP address:   164.117.210.61
JDISS server IP address:             164.117.210.100
Default router IP address:           164.117.210.5
DNS domain name:                 osf.disa.smil.mil
Primary DNS server IP address:       164.117.210.63

Is the above information correct? (y/n)[n]:

NOTE:  All data listed above are examples!
```

27. Verify the information, select **[y]**, and press <**Return**>.

```
Asked if steps 2 through 27 were skipped (Kernel configuration file
was used).

The IP address of you default router is: <Example: 164.117.210.5>
Is this correct? (y/n)[n]:
```

28. Verify the default router IP address is correct, select **[y]**, and press <**Return**>. If the IP address is incorrect , select **[n]**, press <**Return**>.

```
Asked if answer to previous question was n.

Enter IP address of the default router:
```

29. Enter the **IP address** of the default router for the sub-network, and press <**Return**>.

```
The IP address of the default router is : <Example: 164.117.210.5>

Is this correct for this network? (y/n)[n]:
```

30. Verify the information, select **[y]**, and press <**Return**>.

```
Is DNS server up? (y/n)[n]:
```

31. Select the appropriate answer, **[y** or **n]**, and press <**Return**>.

NOTE: Steps 32 through 34 are asked on NIS+ server only

---

32. Enter the **hostname** of the GCCS platform and press <**Return**>.

```
Enter IP address of GCCS platform:
```

```
We will now build your NIS + /etc/nis/hosts file, if you wish

Enter hostname and IP address of all GCCS platforms at this site when
prompted.  Do not use aliases for hostnames!


Enter a RETURN when completed or if you wish to do it at a later
time.

Enter hostname of GCCS platform:
```

33. Enter the IP address of the GCCS platform and press <**Return**>.

```
You have entered the following:
<example: alpha>    <example: 164.117.210.77>
Is this correct? (y/n)[n]:
```

34. Verify the information, select **[y]**, and press <**Return**>.

35. Select the appropriate answer, **[y** or **n]**, and press <**Return**>. If the system does not have a */home2* partition, select **[y]**.

```
Creating /etc/nis/netgroup file.
Is this platform going to be a SEGMENT INSTALLATION SERVER?(y/n)[n]:
```

36. Enter the **broadcast** here:

```
Following output only if answered [y] to above question.
Sharing /home2, this is required on Segment Installation Server.
Following output only if not building the EM server and not using
kernel configuration file.
The broadcast address of Executive Manager is:  <Example:
164.117.210.255>
The broadcast address of this platform is <Example: 164.117.210.255>.
Please note, this address and use it on all other platforms.
Does this match the broadcast address of the Executive Manager?
(y/n)[n]:
```

37. Verify the broadcast address matches the address entered above, select **[y]**, and press <**Return**>.

```
Enter the broadcast address of the Executive Manager server:
```

38. Enter the broadcast address of the EMS and press <**Return**>.

```
The broadcast address you have entered is: <Example: 164.117.210.255>
Is this value correct?(y/n)[n]:
```

39. Verify the broadcast address is correct, select **[y]**, and press <**Return**>.

```
Setting up X Window environment, please wait a moment.
Waiting for extraction of /h and patches to complete

Determining if system has patches on it that require upgrading
Those patches requiring upgrading will be backed out
Patches already installed on system will be removed from
installation cluster.

Executing SecAdm PostInstall

Executing SysAdm PostInstall

Patch Cluster install script for GCCS Version 2.2
```

```
WARNING:   SYSTEMS WITH LIMITED DISK SPACE SHOULD NOT INSTALL
PATCHES:
With or without using the save option, the patch installation process
will still require that least 4 MBytes is available in the /, /usr,
/var,
or /opt partitions where patches are typically installed.  Running
out of disk space during installation may result in only partially
loaded patches.  Check and be sure adequate disk space is
available before continuing.

Are you ready to continue with install? [y/n]:
```

40. Select **[y]**, and press <**Return**>.

```
Determining if sufficient save space exists . . .
Sufficient save space exists, continuing
Installing patches loacted in /tmp/SUNSOLVE/Required
Installing 101317-16 . . .
Installing 101318-80 . . .
          .
          .
          .
```

The installation of the Solaris 2.3 patches takes approximately one hour to complete. The system will automatically reboot and will come up with the GCCS globe displaying. Any patches that do not install will be copied to /opt. The patch installation log is located in */var/sadm/install_log/*

4.5 Securing and Configuring the GCCS COE Kernel Installation

Perform the following steps:

1. Log in as **root**.

2. Use the *passwd* command to change the passwords for *sysadmin* and *secman*:

   passwd sysadmin <**Return**>
   passwd secman <**Return**>

3. To modify the login window greeting edit the /h/EM/libs/xdm/Xresources file and change the following lines:

Xlogin*greeting:	*Desired Greeting*
Xlogin*unsecureGreeting:	Desired Greeting

4. To modify the message displayed after you enter your password edit the following file:

   /usr/openwin/lib/xdm/disa_msg

4.6 GCCS COE Kernel 2.2 Installation Complete

The installation and configuration of the GCCS COE Kernel Version 2.2 is now complete. You should now go to the appropriate section of this manual as listed below:

- If you are installing SUN software packages go to Section 5.

- If you are building an EMS go to Section 6.

- If you are building an Application Server (JOPES, JMCIS, etc.), Oracle Database Server, or Client Workstation go to Section 7, "Building the GCCS Core System".

- If you are building a Remote Workstation go to Section 14, "Building Remote Platforms".